(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: **02.06.2010 Bulletin 2010/22**

(51) Int Cl.: H03G 3/30 (2006.01)

(43) Date of publication A2: **27.01.2010 Bulletin 2010/04**

(21) Application number: 09173340.2

(22) Date of filing: 02.03.2001

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU

MC NL PT SE TR

(30) Priority: 04.03.2000 US 519734

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC: 01916349.2 / 1 264 411

(71) Applicant: Qualcomm Incorporated San Diego, CA 92121-1714 (US)

(72) Inventors:

Younis, Saed
 San Diego, CA 92121-1714 (US)

Simic, Emilija
 La Jolla, CA 92037 (US)

 Wilborn, Thomas San Diego, CA 92124 (US)

Zhang, Haitao
 San Diego, CA 92116 (US)

 Filipovic, Daniel Solana Beach, CA 92075 (US)

Kaufman, Ralph
 San Diego, CA 92121-1714 (US)

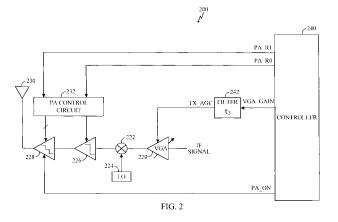
Lin, Jian
 San Diego, CA 92126 (US)

(74) Representative: O'Neill, Aoife et al Tomkins & Co.5 Dartmouth Road Dublin 6 (IE)

(54) Transmitter architectures for communications systems

(57) Transmitter architectures for a communications system having improved performance over conventional transmitter architectures. The improvements include a combination of the following: faster response time for the control signals, improved linearity, reduced interference, reduced power consumption, lower circuit complexity, and lower costs. For a cellular application, these improvements can lead to increased system capacity, smaller telephone size, increased talk and standby times, and greater acceptance of the product. Circuitry is provided

to speed up the response time of a control signal. The control loop for various elements in the transmit signal path are integrated. A gain control mechanism allows for accurate adjustment of the output transmit power level. Control mechanisms are provided to power down the power amplifier, or the entire transmit signal path, when not needed. The gains of the various elements in the transmit signal path are controlled to reduce transients in the output transmit power, and to also ensure that transients are downward.





EUROPEAN SEARCH REPORT

Application Number EP 09 17 3340

Category	Citation of document with in of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
X Y	US 5 627 857 A (WIL 6 May 1997 (1997-05 * abstract; figures * column 4, lines 1	SON NATHANIEL B [US]) 5-06) 5-2, 5-10 *	1,6-11 1-13	INV. H03G3/30	
Υ	LTD) 12 January 199 * abstract; figures		1-13		
Υ	US 5 808 575 A (HIM 15 September 1998 (* abstract; figures * column 5, lines 1 * column 12, lines * column 16, lines	3-5 * -9 * 38-50 *	1-13		
Υ	EP 0 977 354 A1 (NI TELEPHONE [JP]) 2 February 2000 (20 * abstract; figures	000-02-02)	1-13	TECHNICAL FIELDS SEARCHED (IPC) H03G H03F	
Υ	[FI] NOKIA CORP [FI 1 December 1999 (19 * abstract; figures	99-12-01)	1-13	nosr	
Α	[KR]) 24 June 1999 * abstract; figures		1-13		
	The present search report has	been drawn up for all claims			
	Place of search	Date of completion of the search		Examiner	
	Munich	27 April 2010	910 Wichert, Beate		
X : part Y : part docu A : tech O : non	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anot ument of the same category inological background -written disclosure rmediate document	L : document cited fo	ument, but public the application rother reasons	shed on, or	

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 09 17 3340

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-04-2010

cite	Patent document cited in search report		Publication Patent family date member(s)			Publication date	
US	5627857	A	06-05-1997	AT AU CA CN DE DE ES FI HK IL NZ RU WO ZA		B2 A A1 A1 T2 A1 AA A A C2 A1	15-12-20 29-04-19 01-04-19 20-03-19 02-12-19 23-01-20 01-07-19 01-07-20 18-03-19 11-07-20 28-07-19 27-10-20 20-03-19
JP	11008560	Α	12-01-1999	NONE			
US	5808575	Α	15-09-1998	GB ID JP	2307121 / 17245 / 9130245 /	Α	14-05-19 11-12-19 16-05-19
EP	0977354	A1	02-02-2000	WO JP US	9943083 / 3387508 6265935	B2	26-08-19 17-03-20 24-07-20
EP	0961402	A2	01-12-1999	CN DE JP US	1241881 69929938 2000049630 6563883	T2 A	19-01-20 09-11-20 18-02-20 13-05-20
WO	9931799	A1	24-06-1999	AU AU BR CN DE EP IL JP	732676 1508799 9807388 1247647 69833386 0960475 131313 2000513544	A A A T2 A1 A	26-04-26 05-07-19 14-03-26 15-03-26 13-07-26 01-12-19 24-06-26